UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

October 25, 2022

Mr. Jonathan Stanton
Director
Jefferson County Department of Health
1400 Sixth Avenue South
Birmingham, Alabama 35233

Dear Mr. Stanton:

Thank you for submitting the Jefferson County Department of Health's (JCDH's) 2022 annual Ambient Air Monitoring Network Plan on June 29, 2022. The Network Plan is required by 40 Code of Federal Regulations (CFR) § 58.10. The U.S. Environmental Protection Agency understands that the JCDH provided the public a 30-day review period on the Network Plan and comments were received. Thank you for including the public comments and your responses to them. The EPA requests that your final Network Plan including the public comments and responses to comments be posted on your website.

With this letter, the EPA approves JCDH's 2022 Network Plan with the exception of the sulfur dioxide (SO_2) network which is approved only for the period during which the Bluestone Coke facility is not operating. The EPA understands that the Bluestone Coke facility remains in a non-operational state as the company seeks to undergo an extensive rebuild. However, the EPA also understands that Bluestone Coke intends to restart operation once necessary repairs are made to bring the facility into compliance with Clean Air Act requirements.

Given Bluestone Coke's plans to complete an extensive rebuild during this period, the EPA believes the results of the prior modeling study conducted in 2021 may no longer be representative of future operations. Therefore, continuation of EPA's SO_2 network approval is contingent on the occurrence of either of the following prior to the restart of Bluestone Coke's operations: 1) the JCDH submits and EPA approves a network plan addendum containing revised modeling using maximum allowable emissions reflecting repair and maintenance at the facility and demonstrating no modeled violations of the 1-hour SO_2 NAAQS, or 2) the JCDH submits and EPA approves a network plan addendum proposing to install and operate a new SO_2 monitor that meets state and local air monitoring station (SLAMS) requirements and is sited to be representative of the expected maximum 1-hour SO_2 concentrations, in which case the SO_2 monitor must also be operational prior to Bluestone Coke's proposed restart date.

The proposed network plan addendum must be posted on the JCDH website and subject to a 30-day public comment period. Following the 30-day public comment period, the JCDH must submit the final network plan addendum to the EPA, including a summary and response to comments received, no fewer than 120 days prior to Bluestone Coke's restart. If any of these conditions are not met, the EPA may withdraw the conditional approval of the JCDH's SO_2 network and disapprove the SO_2 portion of the Network Plan.

Thank you for working with the EPA to monitor air pollution and promote healthy air quality in Jefferson County. EPA's technical review and comments on the agency's Network Plan are enclosed. Please let us know of any problems in meeting any of the requirements we have identified. If you have any questions or concerns, please contact Katy Lusky at (404) 562-9130 or Ryan Brown at (404) 562-9147.

Sincerely,

ANTHONY TONEY

Digitally signed by ANTHONY TONEY
Date: 2022.10.25 10:29:54 -04'00'

For Caroline Y. Freeman
Director
Air and Radiation Division

Enclosure

cc: Ron Gore, Chief
Air Division
Alabama Department of Environmental Management

Keith Harris, Chief
Quality Assurance Section, LSASD

Michael Hansen, Executive Director
G.A.S.P.

ENCLOSURE

2022 Jefferson County Department of Health
Ambient Air Monitoring Network Plan
U.S. EPA Comments and Recommendations

This document contains the U.S. Environmental Protection Agency's comments and recommendations on the Jefferson County Department of Health's (JCDH's) 2022 Ambient Air Monitoring Network Plan (Network Plan). Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D, including those for ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and lead (Pb).

The minimum monitoring requirements are based on core based statistical area (CBSA) boundaries as defined by the U.S. Office of Management and Budget (OMB); July 1, 2021, population estimates from the U.S. Census Bureau; and historical ambient air monitoring data. Minimum monitoring requirements for O_3, $PM_{2.5}$, and PM_{10}, only apply to metropolitan statistical areas (MSAs), which are a subset of CBSAs. OMB currently defines Birmingham-Hoover as an MSA in the state of Alabama. The July 1, 2021, population estimate from the U.S. Census Bureau is shown in Table 1.

Table 1: Metropolitan Statistical Areas and July 1, 2021 Population Estimates

MSA Name	Population
Birmingham-Hoover, AL	1,114,262

Network Changes Proposed by the JCDH
40 CFR §58.10(b), §58.14

The EPA has approval authority for changes to state or local air monitoring stations (SLAMS). SLAMS include the ambient air quality monitoring sites and monitors that are required by Appendix D of 40 CFR Part 58 and are needed for the monitoring objectives of Appendix D, including NAAQS comparisons, but may also serve other data purposes. The EPA is not required to approve changes made to special purpose monitors (SPMs). SPMs are monitors designated by the monitoring agency as special purpose and do not count towards minimum monitoring requirements of 40 CFR Part 58. SPMs are required to be identified in the Network Plan for public and the EPA review.

As indicated in Table 2, the JCDH does not propose to discontinue any monitors in its 2022 Network Plan; however, the JCDH does propose one change that is described in Table 3 below. Additional discussion of the SO_2 monitoring network is provided in the SO_2 Monitoring Requirements section.

Table 2. Monitors Proposed for Discontinuation

Agency	AQS ID	Site Name	Pollutant	Type	Comments
JCDH	N/A	N/A	N/A	N/A	N/A

Table 3. Proposed Changes in Monitoring

AQS ID	Site Name	CBSA	Pollutant	Type	Comments
01-073-1010	Leeds	Birmingham-Hoover, AL	$PM_{2.5}$	T640x FEM	Evaluate the T640x under the $PM_{2.5}$ Comparability Assessment guidance for up to 24 months. This monitor will be a SPM and the $PM_{2.5}$ data will not be used for regulatory decision making for either the annual or daily $PM_{2.5}$ NAAQS during this time. This is approved and additional discussion including any minimum requirements is provided below.

Public Inspection and Comments
40 CFR §58.10(a)(1)

According to 40 CFR §58.10(a)(1), "[t]he annual monitoring network plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA and the submitted plan shall include and address, as appropriate, any received comments." The JCDH provided the public a 30-day review period and several comments were received. The JCDH submitted these comments and its responses with the final Network Plan. Public comments were received on the Network Plan from one commentor, the Greater-Birmingham Alliance to Stop Pollution (GASP). The table below summarizes Network Plan public comments, the agency's responses, and EPA's comments.

Table 4: Network Plan Public Comments and Agency Responses

Commentor	Summary of Public Comment	Comment Related to the Air Monitoring Network	JCDH Response	EPA Comments
GASP	We specifically request more monitoring that is responsive to issues raised repeatedly by communities impacted by air pollution.	Yes		As stated in the cover letter to this technical review, the EPA is approving JCDH's 2022 Network Plan, with contingencies around Bluestone Coke cold-idle status and potential start-up in the future. We encourage GASP to reach out to EPA Region 4 to discuss the sensor loan program. https://www.epa.gov/air-sensor-toolbox/air-sensor-loan-programs
	As Written, the Air Plan is Vague and Should Contain More Information to Contribute to Meaningful Involvement in the Public Comment Process.	Yes	The Network Plan JCDH posted for public comment meets the requirements of 40 CFR 58 and follows the form that JCDH has used in the past. GASP appears to think that "meaningful" means that JCDH should include a voluminous explanation for every site including historical information for them. The Network Plans are written annually to highlight the ambient monitoring network and any changes that may have occurred. Because there were not any significant changes for this plan there isn't a need for	The Network Plan meets minimum requirements.

Commentor	Summary of Public Comment	Comment Related to the Air Monitoring Network	JCDH Response	EPA Comments
			a lengthy discussion. JCDH has information available on its website which covers all other air pollution information for Jefferson County. More specifically, JCDH publishes an Air Quality Report annually that goes over air quality in great detail. This report is available at https://www.jcdh.org/SitePages/Misc/AirProgReports.aspx.	
	[*comment related to American Rescue Plan (ARP) air monitoring funding to JCDH*] This update does not address which monitoring sites will receive upgrades nor how such upgrades may affect the monitoring network or air quality within Jefferson County.		With respect to GASP's comment on the impact of the American Recovery Plan (ARP) on the network, JCDH does not have enough information at the time of writing the plan and this response to offer anything more than what was stated in the plan. JCDH cannot predict how the acquisition of money for EPA will translate to equipment for a few reasons. JCDH has not received any ARP money and JCDH cannot start the purchasing of equipment (including open bids) until this occurs. Second, the lead time to get equipment, especially given supply chain issues, is unclear so JCDH cannot give an estimate on when equipment would be delivered or installed at any of its sites. Compounding the issue, JCDH will not know how much equipment will cost which will impact what equipment can be purchased with ARP money. For the aforementioned reasons JCDH believes that it is premature and not accurate to try to predict possible changes until they are actually known with a degree of certainty. JCDH has every intention to update the Network Plan with any and all changes including those impacted by any ARP money received.	The EPA has included a section addressing American Rescue Plan funding near the end of this technical review. The EPA has asked the JCDH to include the equipment and supplies purchased with ARP funds, including modifications made to their network, in the next two Network Plans as these are procured and installed.
	[comment related to Cr^{+6} study and Bluestone SO_2] However, the fact remains that members of the public, to which the Air Plan must provide data and information sufficient for meaningful public comment, would not be aware reading this Air Plan		First, EPA presented the results and further plans to the Wylam community on two virtual meetings. EPA and its staff are in charge of this study and the communication of any information. GASP should contact EPA for further information.	The EPA is working with the JCDH to conduct a follow-up study at the Wylam site. Please see this EPA web page for more information about what has already been done. https://www.epa.gov/al/us-epa-wylam-neighborhood-air-monitoring-study

Commentor	Summary of Public Comment	Comment Related to the Air Monitoring Network	JCDH Response	EPA Comments
	of these issues because there is no information or discussion about them. This information certainly would contribute to a better understanding of the air quality trends within Jefferson County. As such, JCDH should have included the above information and at the very least, a status update on how these air quality issues impact the current Air Plan and plans for monitor sites.		Currently, no action is needed with respect to SO2 near Bluestone Coke. There are no current air quality issues as it pertains to SO2 and Bluestone is not operating currently. As detailed in the previous Network Plan, any required steps hinge on the operational status and other actions outside of this Network Plan. JCDH would remind GASP that the Network Plan is not a discussion of every air pollution concern but rather a required document as set forth in 40 CFR 58 to update the monitoring network for the upcoming year. The Network Plan is not the appropriate venue to discuss any enforcement actions. Further, JCDH cannot comment on any current litigation and it is unclear as to what "status" JCDH could offer to GASP at this point especially when GASP is a party to the litigation.	Information about SO_2 emissions from Bluestone Coke is included in the SO_2 section below. If Bluestone Coke resumes its operations, the JCDH is required to characterize emissions from the facility and SO_2 concentrations in the area or install a monitor to be sited in an area of expected maximum concentration.
	EPA Should Revise the Minimum Criteria for Monitoring Networks in Several Communities within Jefferson County With Environmental Justice Issues.		GASP is asking EPA so JCDH will not offer a response to these comments. GASP should seek further information on these topics from EPA. Nevertheless, if GASP wishes to seek further information from JCDH on these issues they are free to by contacting the JCDH.	The EPA is undergoing a reconsideration of the $PM_{2.5}$ NAAQS. The proposed rule, once released, will have a public comment period and all are encouraged to submit comments. The proposed rule will be located here: https://www.epa.gov/pm-pollution/national-ambient-air-quality-standards-naaqs-pm
	…where such high concentrations of Cr have been found at the Wylam site, it would be prudent to also include a PM2.5 monitor at the Fairfield site, in proximity to U.S. Steel-Fairfield Works….Obtaining more data from the Fairfield Site would only enhance the ongoing study with regard to Cr and Cr6 in Wylam. Adding a CSN PM2.5 monitor to the Fairfield Site also better protects susceptible and		GASP is asking EPA so JCDH will not offer a response to these comments. GASP should seek further information on these topics from EPA. Nevertheless, if GASP wishes to seek further information from JCDH on these issues they are free to by contacting the JCDH.	At this time, the EPA is not requiring additional $PM_{2.5}$ monitoring at the Fairfield site; however, we are working with the JCDH on a second Cr^{+6} Study at the Wylam site. For more information about what has been done, please see the following website: https://www.epa.gov/al/us-epa-wylam-neighborhood-air-monitoring-study Also, we encourage GASP to reach out to EPA to discuss the sensor loan program.

Commentor	Summary of Public Comment	Comment Related to the Air Monitoring Network	JCDH Response	EPA Comments
	vulnerable populations in Wylam and Fairfield.			https://www.epa.gov/air-sensor-toolbox/air-sensor-loan-programs
	EPA Must Revise the Minimum Criteria for Monitoring Networks to Assist JCDH in Installing a PM2.5 Monitor in the Acipco-Finley Neighborhood and EPA Should Prioritize this Neighborhood for Region 4's Air Sensor Loan Program.		GASP is asking EPA so JCDH will not offer a response to these comments. GASP should seek further information on these topics from EPA. Nevertheless, if GASP wishes to seek further information from JCDH on these issues they are free to by contacting the JCDH.	The JCDH is encouraged to investigate reports and photos of repeated burning at the ACIPCO facility and take appropriate action if needed. EPA is undergoing a reconsideration of the $PM_{2.5}$ NAAQS. The proposed rule, once released, will have a public comment period and all are encouraged to submit comments. The proposed rule will be located here: https://www.epa.gov/pm-pollution/national-ambient-air-quality-standards-naaqs-pm Also, GASP can contact EPA Region 4 if it is interested in participating in the Sensor Loan Program. https://www.epa.gov/air-sensor-toolbox/air-sensor-loan-programs
	The request remains the same: a special purpose $PM_{2.5}$ TSP or speciated monitor that can operate at the fenceline of Jordan and Rather.		JCDH thanks GASP for their comments. JCDH believes that the Network Plan as written accurately describes its monitoring network and is in accordance with 40 CFR 58. With regards to GASP's concerns regarding areas outside of this plan, JCDH encourages GASP to contact JCDH to discuss. JCHD would like to note that JCDH and GASP have discussed Acipco-Finley as recently as May 2022.	If the JCDH decides to install a monitor near these facilities, the EPA is willing to support that effort. EPA's $PM_{2.5}$ air sensor loan could also be considered here.

The JCDH responded to all comments received on their air monitoring network and the Network Plan meets the public comment requirements of 40 CFR 58.10.

$PM_{2.5}$ Continuous Federal Equivalent Methods
40 CFR § 58.11(e)

The EPA regulations contain provisions for handling data collected using continuous $PM_{2.5}$ FEMs. These procedures are found at 40 CFR §58.11(e). If an agency can demonstrate that the FEM data are not of sufficient comparability to a collocated FRM, then the monitoring agency may request that the FEM data not be used in comparison to the NAAQS. The EPA also allows, if requested, an initial NAAQS exclusion period for the evaluation of continuous equivalent PM methods in an area in order to collect up to 24 months of comparability data.

The JCDH requested to evaluate a Teledyne T640x at the Leeds site (AQS ID 01-073-1010) for up to 24 months. The T640x will be labeled as a SPM during the evaluation period. A $PM_{2.5}$ FRM must remain as the primary monitor at this site during this evaluation period. Also, QA collocation requirements must continue to be met for manual $PM_{2.5}$ methods. While the T640x is an equivalent continuous method capable of producing NAAQS comparable $PM_{2.5}$ and PM_{10} data, the JCDH has only requested the evaluation period for $PM_{2.5}$. The EPA approves the exclusion of the annual and daily $PM_{2.5}$ NAAQSs during this evaluation period. The PM_{10} data from this monitor will be NAAQS comparable.

The $PM_{2.5}$ and PM_{10} data from the T640x must be reported to 88101 and 81102, respectively. Once the NAAQS exclusion is applied in AQS for $PM_{2.5}$, please let us know and then EPA will add its concurrence.

Operating Schedules
40 CFR §58.12

As stated, and proposed in the Network Plan, all monitors meet the required operating schedules for all continuous analyzers and all manual PM_{10}, $PM_{2.5}$, and $PM_{2.5}$ Speciation Trends Network (STN) monitors.

Air Quality Index (AQI) Reporting
40 CFR §58.50

AQI reporting is required for MSAs with populations of 350,000 or more. The Network Plan indicates that the JCDH reports the daily AQI. Thus, the JCDH is meeting its AQI reporting requirements.

National Core (NCore) Monitoring Network
40 CFR Part 58, Appendix D, Section 3.0

A requirement that each state operate at least one NCore site is found in 40 CFR Part 58, Appendix D, Section 3. The NCore site must measure, at a minimum, $PM_{2.5}$ particle mass using continuous and integrated/filter-based samplers, speciated $PM_{2.5}$, $PM_{10-2.5}$ particle mass, O_3, SO_2, CO, NO/NOy, wind speed, wind direction, relative humidity, and ambient temperature. This section requires each state to operate at least one NCore site. States may delegate this requirement to a local agency. The state delegated this requirement to the JCDH which operates the NCore monitors at its North Birmingham site.

Table 5. NCore Monitoring Sites

CBSAs	AQS IDs	Site Name	Requirement Met (Y/N)
Birmingham-Hoover, AL MSA	01-073-0023	North Birmingham	Y

The NCore monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

O_3 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.1 and Table D-2

Ambient air monitoring network design criteria for O_3 are found in 40 CFR Part 58, Appendix D, Section 4.1. This section requires a state, and where appropriate local agencies, to operate O_3 sites for various locations depending upon area size and typical peak concentrations. The Birmingham-Hoover, AL MSA is required to have two O_3 SLAMS monitors and the JCDH and the ADEM together operate seven O_3 SLAMS monitors there.

Table 6. Ozone Design Criteria – Minimum Required SLAMS Monitors

MSA	# Minimum Required SLAMS	# of SLAMS	AQS IDs (site name) of SLAMS	Requirement Met (Y/N)
Birmingham-Hoover, AL	2	7	01-073-5003 (Corner) 01-073-1003 (Fairfield) 01-073-1010 (Leeds) 01-073-1005 (McAdory) 01-073-0023 (NCore) 01-073-6002 (Tarrant) 01-117-0004 (Helena)*	Y

*Operated by ADEM.

The proposed O_3 monitoring network described in the Network Plan meets the design criteria of 40 CFR Part 58, Appendix D, Table D-2 for the Birmingham-Hoover, AL MSA.

CO Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.2

Ambient air monitoring network design criteria for CO are found in 40 CFR Part 58, Appendix D, Section 4.2. CBSAs with populations over one million are required to operate one CO monitor collocated at a near-road NO_2 site. Because the Birmingham-Hoover, AL CBSA has a population over one million, the JCDH operates one CO monitor, and it is located at the Arkadelphia near-road monitoring site.

Table 7. CO Design Criteria – Minimum Required SLAMS Near-Road Monitors

CBSA	# Minimum Required Near-Road	# Near-Road in Plan	AQS IDs (site name) of Existing Near-Road in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	1	01-073-2059 (Arkadelphia)	Y

The Regional Administrator required monitoring for CO are found in 40 CFR Part 58, Appendix D 4.2.2. The section states, "The Regional Administrators, in collaboration with states, may require

additional CO monitors above the minimum number of monitors required in 4.2.1." The Regional Administrator has not required any additional CO monitoring in the CBSA at this time.

Table 8. CO Design Criteria – Minimum Required SLAMS RA Required Monitors

CBSA	# Minimum RA Required	# RA in Plan	AQS IDs (site name) of RA Required in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	0	0	N/A	Y

The requirement in Table 8 does not apply for the Birmingham-Hoover, AL CBSA. The proposed CO monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

NO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.3

Ambient air monitoring network design criteria for NO_2 are found in 40 CFR Part 58, Appendix D, Section 4.3. Three types of NO_2 monitoring are required: near-road, area-wide, and Regional Administrator required. These types of NO_2 monitoring are described in Sections 4.3.2, 4.3.3, and 4.3.4, respectively. The JCDH is required to operate one NO_2 near-road monitor and it does that at its Arkadelphia near-road site.

Table 9. NO_2 Design Criteria - Minimum Required SLAMS Near-Road Monitors

CBSA	# Minimum Required Near-Road	# Near-Road in Plan	AQS IDs (site name) of Existing Near-Road in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	1	01-073-2059 (Arkadelphia)	Y

Ambient air monitoring network design criteria for area-wide NO_2 sites are found in Section 4.3.3 of Appendix D to 40 CFR Part 58, which requires a CBSA with more than one million people to operate an area-wide NO_2 monitor.

Table 10. NO_2 Design Criteria - Minimum Required SLAMS Area-Wide Monitors

CBSA	# Minimum Required Area-Wide	# Area-Wide in Plan	AQS IDs (site name) of Area-Wide in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	1	01-073-0023 (North Birmingham)	Y

Ambient air monitoring network design criteria for the Regional Administrator required NO_2 monitoring, often referred to as RA-40 monitoring, are found in 40 CFR Part 58, Appendix D, Section 4.3.4. This section states that "the Regional Administrators, in collaboration with states, must require a minimum of 40 additional NO_2 monitoring stations nationwide in any area, inside or outside of CBSAs, above the minimum monitoring requirements, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. The Regional Administrators, working with states, may also consider additional factors to require monitors beyond the minimum network requirement." However, not all states are required to have such monitors and EPA did not propose any for the state of Alabama. As a result, the JCDH did not include a Regional Administrator required NO_2 monitor in its Network Plan (see Table 11). The full list of NO_2 monitors identified by the Regional Administrators can be found on the EPA's website at http://www.epa.gov/ttnamti1/svpop.html.

Table 11. NO_2 Design Criteria - Minimum Required SLAMS RA-40 Monitors

CBSA	# Minimum Required RA-40	# RA-40 in Plan	AQS IDs (site name) of RA-40	Requirement Met (Y/N)
Birmingham-Hoover, AL	0	0	N/A	Y

The NO_2 monitoring network described by the JCDH in its Network Plan meets all design criteria of 40 CFR Part 58.

SO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.4

Ambient air monitoring network design criteria for SO_2 are found in 40 CFR Part 58, Appendix D, Section 4.4. Section 4.4.2 requires that the population weighted emissions index (PWEI) be calculated by states for each CBSA. As a result, the SO_2 monitoring site(s) required in each CBSA will satisfy minimum monitoring requirements if the monitor(s) is sited within the boundaries of the parent CBSA and is of the following site types: population exposure, maximum concentration, source-oriented, general background, or regional transport. An SO_2 monitor at an NCore station may satisfy minimum monitoring requirements if that monitor is located within a CBSA with minimally required monitors consistent with Appendix D, Section 4.4.2. The PWEI calculated for the Birmingham-Hoover, AL CBSA is 21,163. This PWEI value means that the CBSA is required to have one SO_2 PWEI monitor. Because the JCDH operates two SO_2 monitors in the CBSA, the SO_2 monitoring network outlined in the Network Plan exceeds the minimum SO_2 PWEI requirements specified in 40 CFR Part 58, Appendix D, Section 4.4.2.

Table 12. SO_2 Design Criteria – Minimum Required SLAMS PWEI Monitors

CBSA	# Minimum Required PWEI Monitors	# PWEI Monitors in Plan	AQS IDs (site name) of Existing PWEI in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	2	01-073-0023 (North Birmingham) 01-073-1003 (Fairfield)	Y

The EPA understands that the Bluestone Coke facility is currently not operating as they seek to undergo an extensive rebuild. However, the EPA also understands that Bluestone intends to restart operation once the rebuild process is completed to bring the facility into compliance. With this letter, the EPA approves JCDH's 2022 Network Plan, with the exception of the SO_2 network. The EPA approves the SO_2 network which is approved only for the period during which the Bluestone Coke facility is not operating. Given Bluestone Coke's plans to complete an extensive rebuild during this period, the EPA believes the results of the prior modeling study conducted in 2021 may no longer be representative of future operations. Therefore, continuation of EPA's SO_2 network approval is contingent on the occurrence of either of the following prior to the restart of Bluestone Coke's operations: 1) the JCDH submits and the EPA approves a network addendum containing revised modeling using maximum allowable emissions reflecting repair and maintenance at the facility and demonstrating no modeled violations of the 1-hour SO_2 NAAQS, or 2) the JCDH submits and the EPA approves a network plan addendum proposing to install and operate a new SO_2 monitor that meets SLAMS requirements and is sited to be representative of the expected maximum 1-hour SO_2 concentrations, in which case the SO_2 monitor must also be operational prior to Bluestone Coke's proposed restart date.

The proposed network plan addendum must be posted on the JCDH website and subject to a 30-day public comment period. Following the 30-day public comment period, the JCDH must submit the final network plan addendum to the EPA, including a summary and response to comments received, no fewer than 120 days prior to Bluestone Coke's restart. If any of these conditions are not met, the EPA may withdraw the conditional approval of JCDH's SO_2 network and disapprove the SO_2 portion of the Network Plan.

Table 13. SO_2 Design Criteria – Minimum Required SLAMS RA Monitors

CBSA	# Minimum RA Required	# RA-Required in Plan	AQS IDs (site name) of Existing SLAMS in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	0*	0	None	N/A

*Contingent on the Bluestone Coke facility remaining shutdown or EPA approved modeling showing that future facility operations will not contribute exceedances of the SO_2 NAAQS

SO_2 Data Requirements Rule Monitoring
40 CFR Part 51, Subpart BB

The SO_2 Data Requirements Rule requires that agencies identify and characterize air quality around large sources of SO_2. By January 15, 2016, agencies were required to submit to the EPA a list of sources that emit 2,000 tons per year or more of SO_2, based on the most recently available data. The ADEM identified one source to characterize by monitoring, which is summarized in Table 14.

Table 14. SO_2 Design Criteria – Data Requirement Rule Monitors

CBSA	# Minimum Required	AQS IDs (site name) of Existing SLAMS	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	01-117-9001 (L'hoist, Montevallo Plant)*	Y

*Operated by ADEM

Pb Monitoring Requirements
40 CFR Part 58, Appendix A, Section 3.4
40 CFR Part 58, Appendix D, Section 4.5

The monitoring requirements for Pb found at 40 CFR Part 58, Appendix D, Section 4.5 require that, at a minimum, there must be one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.50 or more tons per year and from each airport which emits 1.0 or more tons per year. There are no Pb sources in Jefferson County which meet the criteria for required monitoring (see Table 15).

Table 15. Pb Design Criteria – Minimum Required SLAMS Source-Oriented Monitors

Source Name	CBSA	# Minimum Required Source-Oriented	# Source-Oriented in Plan	AQS IDs (site name) of Existing Source-Oriented in Plan	Requirement Met (Y/N)
None	Birmingham-Hoover, AL	0	0	N/A	Y

The Pb collocation requirements are found in 40 CFR Part 58, Appendix A, 3.4.4. Those requirements include that: 15 percent of the primary monitoring (not counting non-source oriented NCore sites in the primary quality assurance organization (PQAO) are collocated and have at least one collocated quality control monitor (if the total number of monitors is less than three). These collocation requirements are assessed at the PQAO level. The collocation requirements do not apply to the JCDH, because it does not operate any Pb monitors.

Table 16. Pb Design Criteria – Minimum Required Collocated Monitors

PQAO	# Minimum Required Collocated	# Existing Collocated	AQS IDs (site name) of collocated sites in Plan	Requirement Met (Y/N)
JCDH	0	0	N/A	Y

Pb monitoring is not required in Jefferson County, Alabama. The proposed Pb monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

PM_{10} Monitoring Requirements
40 CFR Part 58, Appendix A, Section 3.3
40 CFR Part 58, Appendix D, Section 4.6 and Table D-4

Ambient air monitoring network design criteria for PM_{10} are found in 40 CFR Part 58, Appendix D, Section 4.6. Table D-4, in this section, indicates the approximate number of PM_{10} stations required in MSAs with populations exceeding 100,000 to characterize national and regional PM_{10} air quality trends and geographical patterns. Two PM_{10} monitors are required in the Birmingham-Hoover, AL MSA and the JCDH operates five monitors (see Table 17).

Table 17. PM_{10} Design Criteria – Minimum Required SLAMS Monitors

MSA	# Minimum Required SLAMS	# SLAMS in Plan	AQS IDs (site name) of Existing SLAMS in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	2	5	01-073-1010 (Leeds) 01-073-0023 (North Birmingham) 01-073-6004 (Shuttlesworth) 01-073-6002 (Tarrant) 01-073-2003 (Wylam)	Y

The PM_{10} collocation requirements for manual methods are found in 40 CFR Part 58, Appendix A, 3.3.4. Those requirements include that: 15 percent of each network of manual PM_{10} methods (at least one site) must be collocated, and the sites with collocated monitors should be among those measuring annual mean concentrations in the highest 25 percent of the network. These collocation requirements are assessed at the primary quality assurance organization (PQAO) level. The JCDH currently operates all continuous PM_{10} methods and is no longer required to operate any manual method PM_{10} collocated monitors in Jefferson County (see Table 18).

Table 18. PM_{10} Design Criteria – Minimum Required Collocated Monitors

PQAO	# Minimum Required Collocated	# Existing Collocated	AQS IDs (site name) of Existing SLAMS in Plan	Requirement Met (Y/N)
JCDH	0	0	N/A	Y

The proposed PM_{10} monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Monitoring Requirements
40 CFR Part 58, Appendix A, Section 3.2.3
40 CFR Part 58, Appendix D, Section 4.7 and Table D-5

Ambient air monitoring network design criteria for $PM_{2.5}$ are found in 40 CFR Part 58, Appendix D, Section 4.7. This section requires the state, and where applicable local agencies, to operate the minimum number of required $PM_{2.5}$ SLAMS sites listed in Appendix D, Table D-5. Three $PM_{2.5}$ monitors are required in the Birmingham-Hoover, AL MSA and the JCDH operates five monitors.

Table 19. $PM_{2.5}$ Design Criteria – Minimum Required SLAMS Monitors

MSA	# Minimum Required SLAMS	# SLAMS in Plan	AQS IDs (site name) of SLAMS in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	3	5	01-073-1010 (Leeds) 01-073-1005 (McAdory) 01-073-0023 (North Birmingham) 01-073-2059 (Arkadelphia) 01-073-2003 (Wylam)	Y

40 CFR Part 58, Appendix A, Section 3.2.3 states that 15 percent of each network of manual $PM_{2.5}$ methods (at least one site) must be collocated. Forty (40) CFR Part 58, Appendix A, Section 3.2.3.1 states that for each distinct monitoring method designation (FRM or FEM) that a PQAO is using for a primary monitor, the PQAO must have 15 percent of the primary monitors of each method designation collocated; and have at least one collocated quality control monitor. The first collocated monitor must be a designated FRM monitor. Forty (40) CFR Part 58, Appendix A, Section 3.2.3.2 states that for each primary monitor designated as an FEM used by the PQAO, 50 percent of the monitors designated for collocation (or the first if only one collocation is necessary) shall be collocated with a FRM quality control monitor and 50 percent of the monitors shall be collocated with a monitor having the same method designation as the FEM primary monitor. Two $PM_{2.5}$ collocated monitors are required in the Birmingham-Hoover, AL MSA and the JCDH exceeds the requirement by operating three monitors (see Table 20).

Table 20. $PM_{2.5}$ Design Criteria – Minimum Required Collocated Monitors

Agency	# Minimum Required Collocated Monitors	# Existing Collocated Monitors	AQS IDs (site name) of Existing SLAMS in Plan	Requirement Met (Y/N)
JCDH	2	3	01-073-1010 (Leeds) 01-073-0023 (North Birmingham) 01-073-2003 (Wylam)	Y

The proposed $PM_{2.5}$ monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Near-road Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.1(b)(2)

Regulatory requirements in 40 CFR Part 58, Appendix D, Section 4.7.1(b)(2) require that in CBSAs with populations of 1,000,000 or more persons, at least one $PM_{2.5}$ monitor is to be collocated at a near-road NO_2 station. One $PM_{2.5}$ collocated monitor is required to be operated in the Birmingham-Hoover, AL MSA and the JCDH meets the requirement by operating one monitor at its Arkadelphia site.

Table 21. $PM_{2.5}$ Design Criteria - Minimum Required SLAMS Near-Road Monitors

CBSA	# Minimum Required Near-Road	# Near-Road in Plan	AQS IDs (site name) of Existing Near-Road in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	1	1	01-073-2059 (Arkadelphia)	Y

The proposed near-road $PM_{2.5}$ monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Continuous Monitoring Requirement
40 CFR Part 58, Appendix D, Section 4.7.2

Regulatory requirements for continuous $PM_{2.5}$ monitoring require that the state, or where appropriate local agencies, must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Appendix D, Table D–5. Two $PM_{2.5}$ continuous monitors are required in the Birmingham-Hoover, AL MSA and the JCDH exceeds the requirement by operating six of these monitors.

Table 22. $PM_{2.5}$ Design Criteria – Minimum Required Continuous Monitors

MSA	# Minimum Required Continuous Monitors	# Continuous Monitors in Plan	AQS IDs (site name) of Existing Continuous Monitors in Plan	Requirement Met (Y/N)
Birmingham-Hoover, AL	2	6	01-073-5003 (Corner) 01-073-1010 (Leeds) 01-073-1005 (McAdory) 01-073-0023 (North Birmingham) 01-073-6004 (Shuttlesworth) 01-073-2003 (Wylam)	Y

At least one required continuous analyzer in each MSA must be collocated with one of the required FRM/FEM/ARM monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor in which case no collocation requirement applies. These minimum continuous $PM_{2.5}$ monitoring requirements are being met by the JCDH. Also, the continuous $PM_{2.5}$ collocation requirements are being met.

The continuous $PM_{2.5}$ monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Background and Transport Sites
40 CFR Part 58, Appendix D, Section 4.7.3

40 CFR Part 58, Appendix D, Section 4.7.3 requires that each state shall install and operate at least one $PM_{2.5}$ site to monitor for regional background and at least one $PM_{2.5}$ site to monitor for regional transport. This requirement is being met in the state by the following monitors operated by the ADEM (see Table 23).

Table 23. $PM_{2.5}$ Regional Background and Transport Monitors

Requirement	# Minimum Required	# in Plan	AQS IDs (site name) of Existing SLAMS in Plan	Requirement Met (Y/N)
Background	1	1	01-049-1003 (Crossville)	Y
Transport	1	1	01-027-0001 (Ashland)	Y

$PM_{2.5}$ Chemical Speciation Network (CSN)
40 CFR Part 58, Appendix D, Section 4.7.4

Monitoring requirements in 40 CFR Part 58, Appendix D, Section 4.7.4 require that each state shall conduct chemical speciation monitoring and analyses at sites designated to be part of the $PM_{2.5}$ Speciation Trends Network (STN). The selection and modification of these STN sites must be approved by the Administrator. The $PM_{2.5}$ CSN includes STN stations and supplemental speciation stations that provide chemical species data of fine particulate. The EPA Administrator has approved two sites in the Birmingham-Hoover, AL MSA to serve as $PM_{2.5}$ CSN speciation monitoring locations and they are identified in Table 24.

Table 24. $PM_{2.5}$ Chemical Speciation Network – Non-SLAMS Monitors

MSA	AQS IDs (site name) of CSN Monitor in Plan
Birmingham-Hoover, AL	01-073-0023 (North Birmingham) 01-073-2003 (Wylam)

Photochemical Assessment Monitoring Stations (PAMS)
40 CFR Part 58, Appendix D, Section 5.0

The required PAMS site for the state of Alabama is located at the North Birmingham site (AQS ID: 01-073-0023) and operated by the JCDH. The EPA will continue to work with the JCDH to address the implementation challenges of this new monitoring program. The PAMS requirement is being met.

Non-SLAMS Monitoring

The Network Plan also includes the following non-SLAMS monitoring summarized in Table 25. These seven monitors are all SPMs.

Table 25. Non-SLAMS Monitors

CBSA	Pollutant, AQS IDs (Site Name), and Monitor Type of Non-SLAMS Monitor in Plan
Birmingham-Hoover, AL	$PM_{2.5}$ continuous: 01-073-5003 (Corner), SPM 01-073-1010 (Leeds), SPM 01-073-1005 (McAdory), SPM 01-073-6004 (Shuttlesworth), SPM 01-073-2003 (Wylam), SPM $PM_{2.5}$ Speciation: 01-073-0023 (North Birmingham), SPM 01-073-2003 (Wylam), SPM

Areas with Environmental Justice Concerns

The EPA recognizes that the Network Plan submitted in 2022 meets the federal regulatory requirements outlined at 40 CFR 58.10 and Appendices A through E. In future plans, including next year's plan, we encourage JCDH to continue to evaluate areas with environmental justice concerns[1] related to ambient air monitoring. Where possible, please add detail to the discussion of environmental justice considerations taken into account and related to the ambient air quality network.

American Rescue Plan

The primary objective of American Rescue Plan (ARP) Ambient Air Monitoring Network Upgrades funding is to enhance monitoring of $PM_{2.5}$ or NAAQS pollutants in and near communities with environmental justice concerns which face disproportionate exposure to these pollutants and health risks and are also associated with increased vulnerability to COVID-19. These funds will primarily be used to replace existing filter-based monitors or otherwise enhance existing monitors in and near those communities to provide 24/7, real-time reporting of air quality concentrations. The funds may be used to address other considerations in and near communities with environmental justice concerns including upgrading other NAAQS pollutant monitoring sites, upgrading certain NAAQS gas monitors and/or equipment not meeting performance or completeness goals, and other possible PM monitoring investments.

The JCDH received funding under the ARP. As a recipient of this EPA grant, it will prepare and initiate procurement requests for equipment purchases, purchase the equipment, and plan for timely set-up and installation of equipment consistent with the goal of enhancing air monitoring activities in environmental justice and underserved communities (see Table 26). Quarterly reports will be submitted as well as a final progress report within 120 days of the project end date. Prior to beginning environmental information operations, the JCDH must submit to the EPA a quality assurance project plan (QAPP) for each new pollutant to be monitored and methods to be used, if applicable, for approval 180 days prior to collection of environmental data.

---

[1]Executive Order 14008, January 27, 2021. Federal Register / vol. 86, No. 19, February 1, 2021, p. 7619. Securing Environmental Justice and Spurring Economic Opportunity. Section 219. Policy.
"To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern. That means . . . turning disadvantaged communities – historically marginalized and overburdened – into healthy, thriving communities . . . ".

Table 26. ARP Monitoring Equipment Upgrades

PQAO	Upgrade
Jefferson County Department of Health	Agilaire 8872 datalogger – 1 site Teledyne API T640 $PM_{2.5}$ Sampler – 1 site Teledyne API T640x $PM_{2.5}$ Sampler – 2 sites Teledyne API T400 O_3 analyzer – 2 sites Teledyne API T703E O_3 Calibrator – 3 sites Monitoring Shelter – 1 site

Memoranda of Agreement (MOA) with Neighboring States
40 CFR Part 58, Appendix D, 2(e)

Section 2(e) of Appendix D to 40 CFR 58 states:

> "The EPA recognizes that State or local agencies must consider MSA/CSA boundaries and their own political boundaries and geographical characteristics in designing their air monitoring networks. The EPA recognizes that there may be situations where the EPA Regional Administrator and the affected State or local agencies may need to augment or to divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator."

The JCDH does not have, and is not currently required to have, a MOA with any agency to address minimum monitoring requirements. The agency currently meets all applicable requirements independently with the exception of the proposed SO_2 network and, where noted above, in areas in the Birmingham-Hoover, AL CBSA outside Jefferson County.

Monitoring Siting Criteria and Site Assessments
40 CFR Part 58, Appendix E

In reference to the Network Plan, 40 CFR Part 58.10(a)(1) states:

> "[t]he plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement."

Site assessment information was generally included for all monitoring sites in the 2022 Network Plan. However, a 2019 EPA technical systems audit (TSA) identified siting criteria issues at several sites in the network including shelters that are in disrepair. The 2021 TSA was a virtual desk audit and site visits were not completed. The JCDH needs to continue working with EPA Region 4 Laboratory Services and Applied Science Division to address any remaining issues including repairing and replacing shelters as identified.

Waivers of Requirements

The EPA's air monitoring regulations allow for the waiver of requirements in specific instances. The EPA requires ongoing waivers to be renewed every five years as part of the network assessment. No waivers of requirements have been requested by the JCDH and none are currently in effect.

Quality Assurance Requirements for Monitoring
40 CFR Part 58, Appendix A

In reference to the Network Plan, 40 CFR §58.10(a)(1) states:

> "The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement."

Several QA findings and concerns were identified during the most recent TSA that occurred in 2021, including repeat findings from the 2019 TSA, that may impact data quality across the JCDH's ambient air monitoring network. The JCDH should prioritize efforts to address these issues as quickly as possible.